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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/039,621	10/24/2001	Brig Barnum Elliott	01-4034	2499
28120	7590	02/22/2006	EXAMINER	
FISH & NEAVE IP GROUP ROPES & GRAY LLP ONE INTERNATIONAL PLACE BOSTON, MA 02110-2624			SAM, PHIRIN	
			ART UNIT	PAPER NUMBER
			2661	

DATE MAILED: 02/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/039,621

Applicant(s)

ELLIOTT, BRIG BARNUM

Examiner

Phirin Sam

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 October 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-47 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 11-16, 19-24, 26-28, 38 and 39 is/are rejected.
- 7) ☒ Claim(s) 5-10, 17, 18, 25, 29-37 and 40-47 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

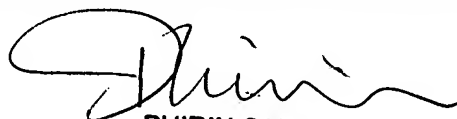
Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.



PHIRIN SAM
PRIMARY EXAMINER

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 10/24/01&07/18/05.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3, 11-16, 19-24, 26-28, 38, and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 6,052,600 (hereinafter referred as “Fette”) in view of US Patent 6,819,681 (hereinafter referred as “Hariharasubrahmanian”).

Fette discloses the invention (**claims 1, 13, 20, and 21**) including claimed a programmable radio comprising:

- (a) at least two functional modules, at least one of the at least two functional modules executing programmed instructions to provide at least one functional aspect of the radio (see Fig. 2, element 210, 212, 208, and 204, col. 4, lines 54-67);
- (b) an internal network connecting the at least two functional modules, communications between the at least two functional modules over the internal network (see Fig. 2, col. 5, lines 18-24, 61-67, and col. 6, lines 1-2, wherein controller 204 communicates with transceiver 202 and reconfigurable resource 208 via the internal network and the same as reconfigurable resources 208 perform the processing operation and communicate via internal network).

Fette does not disclose the packet network protocols. However, Hariharasubrahmanian discloses the network protocols (see col. 4, lines 12-17, 35-41). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the network

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protocols teaching by Hariharasubrahmanian with Fette. The motivation for doing so would have been to provide to use their resources efficiently and permit the devices to respond to these sets of packets before all the packets of the set have been received read on column 2, lines 65-67. Therefore, it would have been obvious to combine Hariharasubrahmanian and Fette to obtain the invention as specified in the claims 1, 13, 20, and 21.

Regarding claims 2, 3, 27, 28, and 39, Fette does not disclose the internal network is chosen from a category of networks consisting of an Ethernet network, an ATM, a token ring network and a resilient packet ring network. However, Hariharasubrahmanian discloses an Ethernet network, an ATM, a token ring network and a resilient packet ring network (see Figs. 1 and 3, col. 4, lines 32-34, 47-53, and col. 6, lines 20-25). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the Ethernet network, the ATM, the token ring network and the resilient packet ring network teaching by Hariharasubrahmanian with Fette. The motivation for doing so would have been to provide to convert the datagram into its own form read on column 6, lines 28-29. Therefore, it would have been obvious to combine Hariharasubrahmanian and Fette to obtain the invention as specified in the claims 2, 3, 27, 28, and 39.

Regarding claim 11, Fette discloses the internal network further comprises a network bus, the at least two functional modules having a connection to the network bus (see Fig. 2, wherein reconfigurable resource 208 connected to each other by a bus).

Regarding claim 12, Fette discloses at least two functional modules are connected in series to form the internal network (see Fig. 2, wherein controller 204, transceiver 202, memory 206, and reconfigurable resources 208 are connected in series).

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Regarding claim 14, Fette discloses at least one of at least two functional modules further comprises:

- (a) a network controller (see Fig. 2, element 204, col. 5, lines 33-37);
- (b) at least one network connector (see Fig. 2, wherein controller 204 and reconfigurable resources 208 are connected by a bus (connector)).

Regarding claim 15, Fette discloses at least one of the at least two functional modules further comprises:

- (a) at least one memory unit storing the programmed instructions for the at least one of the at least two functional modules (see Fig. 2, element 206, col. 5, lines 33-37);
- (b) at least one processing unit executing the programmed instructions (see Fig. 2, element 204, col. 5, lines 33-37).

Regarding claim 16, Fette discloses the internal network facilitates conveying real time streaming media between at least two functional modules (see Fig. 2, elements 202 and 210, col. 6, lines 32-39, wherein the transceiver 202 receives real time streaming media (voice signals) and sends to processor 210 through internal network for decoding and coding).

Regarding claim 19, Fette discloses the internal network is implemented over at least one of a twisted pair, a cable, a fiber and a wireless link (see Figs. 1 and 2, elements 105, 107, wherein elements 105 and 107 are internal network connected within network 100).

Regarding claim 22, Fette discloses the network facilitates loading the programmed instructions within at least two functional modules (see Fig. 2, col. 5, lines 31-49, and col. 6, lines 63-65).

Regarding claim 23, Fette discloses the network controls the execution of the programmed instructions within at least two functional modules (see Fig. 2, col. 5, lines 31-49).

Regarding claim 24, Fette discloses the network monitors the status of at least two functional modules (see Fig. 2, col. 7, lines 5-13, the controller 204 of the network compares (monitors) the received information with the stored information in memory 206).

Regarding claims 26 and 38, Fette discloses a method for providing communications between functional modules implementing a programmable radio, comprising:

- (a) providing an internal packet network between the functional modules (see Figs. 1 and 2, element 110, col. 4, lines 25-32);

Fette does not disclose network protocols. However, Hariharasubrahmanian discloses the network protocols (see col. 4, lines 12-17, 35-41). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the network protocols teaching by Hariharasubrahmanian with Fette. The motivation for doing so would have been to provide to use their resources efficiently and permit the devices to respond to these sets of packets before all the packets of the set have been received read on column 2, lines 65-67. Therefore, it would have been obvious to combine Hariharasubrahmanian and Fette to obtain the invention as specified in the claims 26 and 38.

3. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 6,052,600 (hereinafter referred as "Fette") in view of US Patent 6,819,681 (hereinafter referred as "Hariharasubrahmanian") as applied to claims above, and further in view of US Pub. 2003/0189900 (hereinafter referred as "Barany").

Regarding claim 4, Hariharasubrahmanian and Fette do not disclose IPv4 and IPv6. However, Barany discloses IPv4 and IPv6 (see paragraphs [0023], [0027], [0040]). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine IPv4 and IPv6 teaching by Hariharasubrahmanian and Fette with Barany. The motivation for doing so would have been to provide for packet-switched communications read on paragraph [0024]. Therefore, it would have been obvious to combine Hariharasubrahmanian, Fette, and Barany to obtain the invention as specified in the claim 4.

Allowable Subject Matter

4. Claims 5-10, 17, 18, 25, 29-37, and 40-47 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phirin Sam whose telephone number is (571) 272-3082. The examiner can normally be reached on a compress schedule, from 8:00-5:30, first Wed off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin can be reached on (571) 272 - 3134. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Respectfully submitted,

Date: February 18, 2006



PHIRIN SAM
PRIMARY EXAMINER